

**BID BOND****TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA**  
Hartford, Connecticut 06183

**KNOW ALL MEN BY THESE PRESENTS**, that we Tractor & Equipment Co.

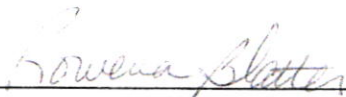
as Principal, hereinafter called the Principal, and Travelers Casualty and Surety Company of America  
a corporation duly organized under the laws of the State of Connecticut as Surety, hereinafter called the Surety,  
are held and firmly bound unto Cascade County

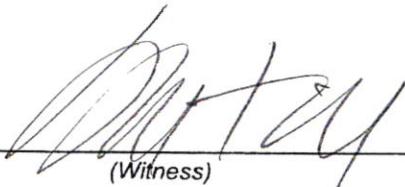
as Obligee, hereinafter called the Obligee, in the sum of Ten Percent of Amount Bid  
Dollars (\$ 10% ), for the payment of which sum well and truly to be made, the said Principal and the said  
Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by  
these presents.

WHEREAS, the Principal has submitted a bid for Three (3) Caterpillar 160M3 AWD Motor Grader

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract  
with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the  
bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for  
the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the  
Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference  
not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the  
Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation  
shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 7th day of September, 2018

  
(Witness)

  
(Witness)  
Sue Hill

Tractor & Equipment Co.

(Principal)

By: 

(Title)

POA

Travelers Casualty and Surety Company of America  
(Surety) (Seal)

By: 

Tina Foster

(Title) Attorney-in-Fact



## POWER OF ATTORNEY

Farmington Casualty Company  
 Fidelity and Guaranty Insurance Company  
 Fidelity and Guaranty Insurance Underwriters, Inc.  
 St. Paul Fire and Marine Insurance Company  
 St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company  
 Travelers Casualty and Surety Company  
 Travelers Casualty and Surety Company of America  
 United States Fidelity and Guaranty Company

Attorney-In Fact No. 232076

Certificate No. 007196689

**KNOW ALL MEN BY THESE PRESENTS:** That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Richard C. Rose, Janice Fennell, Jeremy C. Rose, Keri Ann Smith, Aiza Lopez, Aimee R. Perondine, Stacy Rivera, Jennifer M. Garten, Joshua Sanford, Sue J. Hill, Autumn Schneider, and Tina Foster

of the City of Knoxville, State of Tennessee, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 20th day of April, 2017.

Farmington Casualty Company  
 Fidelity and Guaranty Insurance Company  
 Fidelity and Guaranty Insurance Underwriters, Inc.  
 St. Paul Fire and Marine Insurance Company  
 St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company  
 Travelers Casualty and Surety Company  
 Travelers Casualty and Surety Company of America  
 United States Fidelity and Guaranty Company



State of Connecticut  
 City of Hartford ss.

By: Robert L. Raney  
 Robert L. Raney, Senior Vice President

On this the 20th day of April, 2017, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.  
 My Commission expires the 30th day of June, 2021.



Marie C. Tetreault  
 Marie C. Tetreault, Notary Public



This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 7th day of September, 20 18.

  
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

## WARRANTY & AVAILABILITY GUARANTEE

In order to guarantee the cost of repairs and minimize downtime for the County, all bidders shall include with their bid:

A total machine warranty, including parts and labor for required repairs, for a period of four (4) years four thousand (4,000) hours, whichever occurs first, from date of delivery. Warranty repairs will be provided during regular working hours. If the County requests that work be done outside of regular working hours, which results in overtime, the County will pay the differential between regular time and overtime wage. Lodging, meals, travel time, parts, freight and any transportation of units between County and seller will be at seller's expense.

County will provide seller with Scheduled Oil Sampling for analysis from date of delivery. Seller will provide the oil sample bottles & the expense of the processing the oil samples.

Annual machine inspections and adjustments, as prescribed in the maintenance guides, shall be performed in the field (County's location), unless prior more convenient arrangements are made.

- 98% Guaranteed Machine Availability. Bidder guarantees that the machine shall be operable and available for use by the County for at least 98% of the County's work year, which shall be calculated based on a 2080 hour work year. After any continuous downtime, which exceeds 20 work week hours, Seller shall provide County with a replacement machine that is comparable to the motor grader purchased under this bid proposal at no cost to the County. If seller fails to provide County with a comparable replacement machine, County shall charge seller with an hourly assessment of \$250.00 per hour for all lost work hours beyond the first 20 work hours lost.

County shall make the machines available for repairs and inspection upon reasonable request and notice by the successful bidder.

SIGNED: Kraig Bester

FIRM NAME: Tractor & Equipment Co.

DATE: September 6, 2018

4001 River Drive North  
ADDRESS: Great Falls, Montana 59405

### SUBSCRIBED AND SWORN TO BEFORE ME

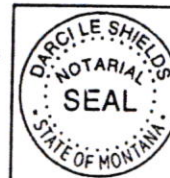
THIS 6<sup>th</sup> DAY OF Sept., 2018.

NOTARY PUBLIC

Print name:

Darci Le Shields

My commission expires: 10/20/18



DARCI LE SHIELDS  
NOTARY PUBLIC for the  
State of Montana  
Residing at Billings, Montana  
My Commission Expires  
October 20, 2018



AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS

**AFFIDAVIT OF NON-COLLUSION**

I hereby swear (or affirm) under the penalty; for perjury;

- (1) That I am the bidder (if bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);
- (2) That the attached bid or bids have been arrived at by the bidder independently, and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;
- (3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and \
- (4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

SIGNED: Kraig Pester

FIRM NAME: Tractor & Equipment Co.

DATE: August 27, 2018

4001 River Drive North  
ADDRESS: Great Falls, Montana 59405

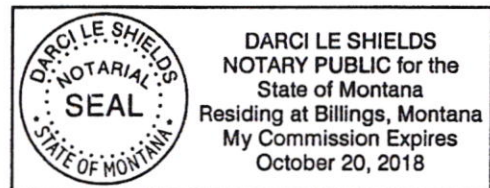
SUBSCRIBED AND SWORN TO BEFORE ME

THIS 27th DAY OF August, 2018.

NOTARY PUBLIC

Print name: Darci Le Shields

My commission expires: 10/20/18



BIDDER'S E.I NUMBER: 81-0202890

(Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941)

## BID FORM

The undersigned Bidder hereby covenants and agrees to provide three (3) or more new 2018 or newer, diesel powered, articulated frame all-wheel drive motor graders, as described in the Specifications, for the price stated. The bidder understands that this bid is effective for thirty (30) days from the date of opening. All lines on the Bid Form must be completed.

Motor Grader Manufacturer Caterpillar Model & Year 2018 160M3AWD

Net purchase price (without trade) including warranty costs,  
F.O.B. Cascade County Shop at Great Falls, Montana (each) \$ 333,000.00

Less trade in for:

Used 2014 CAT 160M2 Motor Grader, Serial # R9T00346 \$ 233,050.00

Used 2014 CAT 160M2 Motor Grader, Serial # R9T00348 \$ 233,050.00

Used 2014 CAT 160M2 Motor Grader, Serial # R9T00304 \$ 233,050.00

5 Yr / 5,000 Hr total machine warranty \$ 5,350.00\*

6 Yr / 6,000 Hr total machine warranty \$ 14,910.00\*

7 Yr / 7,000 Hr total machine warranty \$ \$19,600.00\*

Proposed delivery date: In Stock

**NOTE:** CASCADE COUNTY RESERVES THE RIGHT TO KEEP ANY OR ALL OF THE PIECES OF EQUIPMENT FOR PROPOSED TRADE-IN, AND IN SUCH EVENT, THE BALANCE AMOUNT WILL BE INCREASED IN A LIKE AMOUNT, OR AMOUNTS. THE BID BOND SUBMITTED WITH THIS FORM SHALL BE BASED ON THE FULL AMOUNT BID FOR THE MOTOR GRADER, AND MAY NOT BE REDUCED FOR THE VALUE OF ANY OF THE PROPOSED EQUIPMENT FOR TRADE-IN.

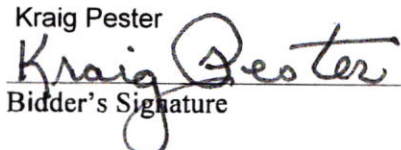
Bidder's Name Tractor & Equipment Co.

Bidder's Address 4001 River Drive North

Great Falls, Montana 59405

Bidder's Phone No. 406.761.7900

Kraig Pester

  
Bidder's Signature

\* Additional warranty must be purchased before the end of the 4 Yr. / 4,000 Hr. warranty included in the bid.



## MACHINE FUEL CONSUMPTION DATA

Fuel consumption.....5.33 gal/hr.

(Please do not enter in a range)

Machine fuel consumption gal/hr figure must be backed up by providing written regional fuel consumption results data from a minimum of 25 like machines. Data must be actual numbers / results retrieved from a minimum of 25 like machines via a gps or cellular data link. Data will be based on average fuel of consumption at least one-hundred like machines. Reports must indicate fuel consumption at idol and while machine is operating under a full load. Vendors must provide a copy of the data used.

10 QTY 160M2/SAWD MOTOR GRADERS

LIFETIME FUEL CONSUMPTION = 116,521 gallons  
LIFETIME TOTAL HOURS = 21,874 hours

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5.33 gph average

## Cascade County Motor Grader Bid September 7, 2018

### Exceptions to the bid

Page 20 A guard shall be provided to protect the machine's transmission from debris.  
Transmission guard offered as an option. (see option page)

Page 11 Upon delivery, the successful bidder shall include all operating, service, parts, and technical repair manuals.

Service manual and parts manual not included in bid. Operating & Maintenance manuals included with each machine.



## Cascade County Motor Grader Bid September 7, 2018

### **Options to the bid**

A transmission guard can be purchase through our parts department for **\$2,800.00**

# Fidelity and Deposit Company

POST OFFICE BOX 1227

OF MARYLAND  
BID BOND

BALTIMORE, MD 21203

KNOW ALL MEN BY THESE PRESENTS:

That we, RDO Equipment Co., as  
Principal, (hereinafter called the "Principal"), and the Fidelity and Deposit Company of Maryland, P.O.  
Box 1227, Baltimore, Maryland 21203, a corporation duly organized under the laws of the State of  
Maryland, as Surety, (hereinafter called the "Surety"), are held and firmly bound unto Cascade County  
as Oblige, (hereinafter called the "Obligee"), in the  
sum of Ten Percent of Amount Bid Dollars (\$ 10%),  
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind  
ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these  
presents.

WHEREAS, the Principal has submitted a bid One or More 2018 or More All-Wheel Drive Motor  
Grader(s)

NOW, THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall  
enter into a contract with the Oblige in accordance with the terms of such bid and give such bond or bonds  
as may be specified in the bidding or contract documents with good and sufficient surety for the faithful  
performance of such contract and for the prompt payment of labor and material furnished in the prosecution  
thereof, or in the event of the failure of the Principal to enter into such contract and give such bond or bonds,  
if the Principal shall pay to the Oblige the difference not to exceed the penalty hereof between the amount  
specified in said bid and such larger amount for which the Oblige may in good faith contract with another  
party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to  
remain in full force and effect.

Signed and sealed this 4th day of September A.D. 2018.

RDO Equipment Co. (Seal)  
Principal

Christina L. Jones Equipment Sales  
Title

FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
Surety

By: Kesha Greene (Seal)  
Attorney-In-Fact  
Kesha Greene



Witness Ann Higgins



Bond Number 9297205

Obligee: Cascade County

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **Michael P. Bond, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Kesha Greene**, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 22<sup>nd</sup> day of July, A.D. 2015.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**

*Michael P. Bond*

By: **Michael P. Bond**  
Vice President



*Eric D. Barnes*

By: **Eric D. Barnes**  
Secretary



**State of Maryland  
County of Baltimore**

On this 22nd day of July, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Michael P. Bond, Vice President and Eric D. Barnes, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

*Constance A. Dunn*

Constance A. Dunn, Notary Public  
My Commission Expires: July 9, 2019



## EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

### CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies,  
this 4th day of September, 2018.



*Gerald F. Haley*

Gerald F. Haley, Vice President

**TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT ALL REQUIRED INFORMATION TO:**

Zurich American Insurance Co.  
Attn: Surety Claims  
1299 Zurich Way  
Schaumburg, IL 60196-1056



ACKNOWLEDGMENT BY SURETY

STATE OF Minnesota }  
County of Hennepin } ss.

On this 4th day of September, 2018, before me personally  
appeared Kesha Greene, known to, me to be the Attorney-in-Fact of  
Fidelity and Deposit Company of Maryland

\_\_\_\_\_, the corporation  
that executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and  
year in this certificate first above written.



J. Miller  
Notary Public in the State of Minnesota  
County of Hennepin

## BID FORM

The undersigned Bidder hereby covenants and agrees to provide three (3) or more new 2018 or newer, diesel powered, articulated frame all-wheel drive motor graders, as described in the Specifications, for the price stated. The bidder understands that this bid is effective for thirty (30) days from the date of opening. All lines on the Bid Form must be completed.

Motor Grader Manufacturer John Deere Model & Year 872GP, 2018

Net purchase price (without trade) including warranty costs,  
F.O.B. Cascade County Shop at Great Falls, Montana (each) \$ \$314,400.00

Less trade in for:

Used 2014 CAT 160M2 Motor Grader, Serial # R9T00346 \$ \$159,500.00

Used 2014 CAT 160M2 Motor Grader, Serial # R9T00348 \$ \$159,500.00

Used 2014 CAT 160M2 Motor Grader, Serial # R9T00304 \$ \$159,500.00

5 Yr / 5,000 Hr total machine warranty \$ \$ 4,420.12 \*

6 Yr / 6,000 Hr total machine warranty \$ \$11,608.31 \*

7 Yr / 7,000 Hr total machine warranty \$ \$18,463.97 \*

\*based on purchasing 4yr total warranty

Proposed delivery date: 60 days from award

**NOTE:** CASCADE COUNTY RESERVES THE RIGHT TO KEEP ANY OR ALL OF THE PIECES OF EQUIPMENT FOR PROPOSED TRADE-IN, AND IN SUCH EVENT, THE BALANCE AMOUNT WILL BE INCREASED IN A LIKE AMOUNT, OR AMOUNTS. THE BID BOND SUBMITTED WITH THIS FORM SHALL BE BASED ON THE FULL AMOUNT BID FOR THE MOTOR GRADER, AND MAY NOT BE REDUCED FOR THE VALUE OF ANY OF THE PROPOSED EQUIPMENT FOR TRADE-IN.

Bidder's Name RDO Equipment Co

Bidder's Address 4900 Tri Hill Frontage Road

Great Falls, MT 59404

Bidder's Phone No. (406) 452-8521

  
Bidder's Signature

## SPECIFICATIONS

**Please describe all warranties, guarantees, and extended coverage's of the motor graders, including an extended service plan.**

Pursuant to the Invitation to Bidders, requesting bids for three (3) or more, new 2018 or newer, diesel powered, articulated frame, tandem drive motor graders, the following minimum requirements, or substantially similar equivalents, shall be met:

- A. Motor grader(s) shall meet OSHA requirements and specifications on the date of the bid opening.
- B. No bid will be considered unless accompanied by a bid bond, bank draft, money order, or certified or cashiers check, in the amount of not less than ten percent (10%) of the total amount for the total number of machines bid, as further described in paragraph 3 of the General Information for Bidders in the Bidder's Package.
- C. Delivery shall be F.O.B. Cascade County Public Works Department, 279 Vaughn South Frontage Road, Great Falls, Montana.
- D. Upon delivery, the successful bidder shall include all operating, service, parts and Technical repair manuals.
- E. Bidder must specify delivery date.
- F. All machines shall be the current advertised and produced model, with all the latest changes and features offered as standard, whether or not called for in the bid specifications.

**PLEASE INDICATE IN THE FOLLOWING IF THE MACHINES OFFERED CAN MEET THE FOLLOWING MINIMUM DESIRED CONFIGURATIONS. ANY "NO" MUST BE CLARIFIED ON A SEPARATE SHEET IF THE BIDDER DESIRES SUPPORT FOR AND ALTERNATE OR SUBSTANTIALLY SIMILAR SPECIFICATION.**

### BASIC SPECIFICATIONS

Y ☒ N ☐

Machine shall be designed and built by the manufacturer.

Y ☐ N ☒

Base Machine Weight shall not be less than 40,908 lbs (18,555 kg). Weight shall include standard machine configuration, lubricants, coolants, full fuel tank and operator of 200 lbs (91 kg).

Y ☐ N ☒

Machine height to top of the cab shall not exceed 130 in (3,308 mm).

Y ☒ N ☐

Machine length from the front outside edge tire to end of tow hitch shall not be less than 351 in (8,912 mm).



- Y\_\_\_ N ☒ Machine Wheel Base (distance from front axle to mid tandem) shall not be greater than 241 in (6,126 mm).
- Y ☒ N\_\_\_ The rear frame shall have two box section channels with an integrated bumper as standard.
- Y ☒ N\_\_\_ A toolbox shall be provided.
- Y ☒ N\_\_\_ Machine shall have vandal protection standard including locks for cab doors, engine side shields (4), top tank radiator access door, engine coolant surge tank, hydraulic reservoir cap, fuel tank cap and tool box.
- Y ☒ N\_\_\_ Machine length from counterweight to ripper shall not exceed 399 in (10,136 mm).

## ENGINE

- Y ☒ N\_\_\_ Engine shall be designed and built by the manufacturer.
- Y ☒ N\_\_\_ Engine shall be a turbo-charged, direct injection, four stroke, 6-cylinder diesel engine.
- Y ☒ N\_\_\_ Engine shall be certified EPA Tier 4 Final and European Union Stage IV
- Y ☒ N\_\_\_ Engine shall be electronically controlled for more efficient fuel injection and fuel burn.
- Y\_\_\_ N ☒ Engine shall achieve rated power requirement with engine displacement not less than 9.3L (568 in<sup>3</sup>) for better performance and fuel economy.
- Y\_\_\_ N ☒ Engine shall develop as standard while AWD is ON a rated net flywheel of at least 241 HP (180 kW) in 1st gear, 262 HP (195 kW) in 2nd gear, 267 HP (199 kW) in 3rd gear, 272 HP (203 kW) in 4th gear, and 293 HP (219 kW) in gears 5 through 8.
- Y ☒ N\_\_\_ Engine will increase its low idle speed to 1,000 rpm when the battery voltage is below 24.5 volts for more than 5 minutes to ensure adequate system voltage and battery reliability.
- Y ☒ N\_\_\_ Altitude deration will not occur at altitudes less than 10,000 ft (3048 m). The deration rate above 10,000 ft (3048 m) shall be 1.5% per 1000 ft (305 m).
- Y ☒ N\_\_\_ Peak engine power shall not be achieved at an engine speed greater than 1800 rpm.
- Y ☒ N\_\_\_ Rated engine power shall not be achieved at an engine speed greater than 2000 rpm.
- Y ☒ N\_\_\_ Engine will have a minimum torque rise of 47% from 2000 rpm to peak torque following SAE J1349 (net power with max fan).
- Y\_\_\_ N ☒ Engine enclosure and daily service points shall be accessible from ground level and grouped on the left side of the machine.
- Y ☒ N\_\_\_ Engine fan shall automatically adjust fan speed via a variable hydraulic fan pump to meet engine cooling requirements thus reducing demand on the engine, putting more horsepower to the ground, reducing noise, improving fuel economy, and reducing heat.
- Y ☒ N\_\_\_ Engine shall allow for at least 500 hours of operation between oil changes.
- Y ☒ N\_\_\_ Precleaner designed to handle large debris fields, including snow shall be provided.
- Y ☒ N\_\_\_ Engine compartment doors shall be lockable without the use of external locks.
- Y ☒ N\_\_\_ Engine shall automatically lower engine torque and alert the operator if critical conditions are detected.
- Y ☒ N\_\_\_ Engine shall have an air-to-air after cooler for superior engine performance.
- Y ☒ N\_\_\_ Engine oil cooler shall be a water to oil shell and tube cooler system.
- Y\_\_\_ N ☒ The Machine shall have a 12000 hour coolant interval from the factory.
- Y\_\_\_ N ☒ The cooling package air intake shall have 2.8 mm perforated inlet screen.
- Y ☒ N\_\_\_ The charged air cooler (ATAAC) shall have 6 fins per inch.
- Y ☒ N\_\_\_ An engine coolant heater shall be provided to assist in cold weather starting.
- Y ☒ N\_\_\_ DEF tank reservoir shall have a heater to thaw DEF fluid

Y ☒ N ☐ DEF lines should be heated to prevent freezing during extremely cold ambient conditions.

## POWERTRAIN/TRANSMISSION

- Y ☒ N ☐ Transmission shall be designed and built by the machine manufacturer.
- Y ☒ N ☐ Transmission shall be a direct drive, power shift, countershaft type.
- Y ☒ N ☐ Transmission shall be equipped with built-in self-diagnostic capability.
- Y ☒ N ☐ Transmission shall have no less than 8 forward speeds and 6 reverse speeds( for added safety).
- Y ☐ N ☒ Transmission shall have 5 working gears between 0-10.8 mph (0-17.4 km/h), for dirt applications.
- Y ☒ N ☐ Transmission shall be isolated/resilient mounted to reduce sound and vibration.
- Y ☒ N ☐ A controlled throttle shifting system shall be standard to smooth directional gear changes without use of the inching pedal.
- Y ☐ N ☒ Electronic Throttle Control (cruise control) shall be standard and shall be controlled by a push button, located on a 3-axis joystick as standard on the right joystick control for resuming and decreasing throttle set.
- Y ☐ N ☒ Electronic Throttle Control modes, set and accelerate functions, shall be located on the right control column for easy access.
- Y ☒ N ☐ A load compensating system for the transmission shall be standard to ensure consistent shift quality in all applications.
- Y ☒ N ☐ Automatic Differential Lock/Unlock feature shall be standard and shall not have speed, shuttle shifting or tandem spinning restrictions for engaging/disengaging. System must be load-sensing for optimal performance. .
- Y ☒ N ☐ Automatic mode shall not be overridden via manual intervention for optimal performance and to prevent unintended differential engagement
- Y ☒ N ☐ Differential Lock/Unlock shall be electro-hydraulically controlled, as a standard feature.
- Y ☒ N ☐ Differential Lock/Unlock shall be a multi-disc design.
- Y ☒ N ☐ Final drive shall be a planetary design.
- Y ☒ N ☐ The rear axle shall be a bolt-on modular design offering easy access to differential components, improving serviceability and contamination control.
- Y ☒ N ☐ The total surface area of all the transmission clutch packs shall not be less than 1831 in<sup>2</sup> (11,812cm<sup>2</sup>).
- Y ☒ N ☐ Diameter at the output end of the transmission shaft shall be no less than 2.29 in (58.1 mm).
- Y ☒ N ☐ Machine shall be equipped with an electronic inching pedal for improved modulation and machine control.
- Y ☒ N ☐ Machine shall be equipped with electronic over-speed protection to prevent the engine and transmission from over speeding, as a standard feature.
- Y ☒ N ☐ Machine shall have no drive shafts that cross over the articulation hitch.
- Y ☒ N ☐ An autoshift transmission option shall be provided on all forward and reverse gears.

## STEERING & IMPLEMENT CONTROLS

- Y ☒ N ☐ Steering wheel shall not be required to operate machine.
- Y ☒ N ☐ Joystick Steering capabilities shall be ISO 5010:1992.
- Y ☐ N ☒ Machine shall employ a friction pack style steering mechanism (not spring-loaded), utilizing the follow steer concept.



- Y\_\_\_ N ☒ The left 3-axis joystick shall control wheel lean with individual left and right wheel lean buttons as standard.
- Y\_\_\_ N ☒ Primary steering shall be achieved via a left-hand, multifunction, 3-axis joystick as standard, using an intuitive steering control system that automatically adjusts steering sensitivity as machine ground speed increases.
- Y\_\_\_ N ☒ Articulation to the right or left shall be achieved by a multifunction, 3-axis left joystick with the twist of such to the right or left by the left-hand, multifunction, 3-axis joystick.
- Y\_\_\_ N ☒ An articulation return-to-center button on the left-hand, multifunction, 3-axis joystick shall return the machine to a straight frame position from ANY articulation angle with the touch of a single button.
- Y\_\_\_ N ☒ The right 3 axis joystick shall primarily control the Drawbar, Circle, and Moldboard.
- Y\_\_\_ N ☒ Machine, Drawbar, Circle, and Moldboard shall be control shall be achieved via a right hand multifunction, 3-axis, joystick, including moldboard slide and tip, drawbar center shift through a 4 way hat switch and circle turn by a left or right twist intuitively.
- Y ☒ N\_\_\_ Blade lift cylinders shall be individually controlled by the multifunction, 3 axis joysticks; Lift and drop of cylinders shall be achieved by the forward and back motion of the respective joystick. Forward (left joystick) lowers left lift cylinder, back(left joystick)raises the left lift cylinder, forward(right joystick) lowers the right right lift cylinder, back(right joystick) raises the right lift cylinder.
- Y\_\_\_ N ☒ Joystick controls shall be mounted to electronically adjustable pedestals, which are hard mounted to the cab floor, independent of the operator seat.
- Y\_\_\_ N ☒ Secondary steering shall have a primary and secondary power supply in the event the primary source is lost.
- Y ☒ N\_\_\_ Transmission direction control shall be a 3-position rocker switch for selecting forward, neutral, and reverse incorporated into a single, 3-axis, multi-function, left-hand joystick control.
- Y ☒ N\_\_\_ Transmission gear selection shall be controlled by dual push buttons for up shifting and downshifting and shall be incorporated into a single, 3-axis, multi-function, left-hand joystick control.
- Y ☒ N\_\_\_ Manual Differential Lock/Unlock shall be operator controlled, via a push-button, located on a single, 3-axis, multi-function, right-hand joystick control.
- Y\_\_\_ N ☒ The machine shall have two redundant articulation sensors.
- Y\_\_\_ N ☒ Two redundant sensors shall be standard in the steering cylinders (one in each).
- Y\_\_\_ N ☒ Three redundant sensors shall be provided in the steering joystick for additional safety.

## **BRAKES**

- Y ☒ N\_\_\_ Machine shall have primary and secondary service brakes.
- Y ☒ N\_\_\_ Entire braking system shall meet all requirements of ISO 3450: 1996.
- Y ☒ N\_\_\_ Two separate left and right hydraulic brake accumulators shall be standard for safety.
- Y ☒ N\_\_\_ Parking brake shall be multi-disc, oil-cooled, spring-applied, hydraulically released, sealed, adjustment-free, and integrated into the transmission. Park brake shall not be externally located.
- Y ☒ N\_\_\_ Parking brake shall be serviceable without removing the transmission.
- Y ☒ N\_\_\_ Service brakes shall be multi-disc, oil-cooled and completely sealed; they will also provide access to check and determine brake wear without removing or disassembling the brake assembly.



- Y ☒ N ☐ Service brake disc surfaces shall be grooved and carry oil between discs and plates with brakes fully applied.
- Y ☒ N ☐ Service brakes shall be hydraulically actuated, utilizing dual independent brake circuits.
- Y ☒ N ☐ Brakes shall be continuously pressurized, filtered, oil cooled.
- Y ☐ N ☒ Machine shall have individual brake pods for each rear wheel, located at each rear wheel inside the tandem box, independent of tandem chains.
- Y ☐ N ☒ Compensation components shall be required at all four tandem brake pods in addition to the brake wear indicator.
- Y ☒ N ☐ Brake line protection, including tandem walkways and hydraulic brake line guarding, shall be required to prevent line damage.
- Y ☒ N ☐ Service brakes shall provide a minimum of 620 in<sup>2</sup> (4003 cm<sup>2</sup>) of total friction material surface area used at each of the four tandem wheels to eliminate braking loads on the power train.

## HYDRAULIC SYSTEM

- Y ☒ N ☐ A standard triple-redundant hydraulic relief system shall protect machine hydraulic components.
- Y ☒ N ☐ Hydraulic implement pump shall produce between 0 and 55.7 gallon/min (210 L/min) of oil flow at 1800 RPM.
- Y ☒ N ☐ Hydraulics system shall be a closed center, load sensing type with a variable displacement, axial piston-type pump.
- Y ☒ N ☐ Hydraulic system shall be fully sealed, using Duo-cone and O-ring face seals to prevent leaks, contamination, and spillage.
- Y ☒ N ☐ The hydraulic tank shall have a baffling system to reduce potential pump cavitation.
- Y ☐ N ☒ The maximum hydraulic system pressure shall be no less than 3,500 psi (24,150 kPa).
- Y ☒ N ☐ Implement valves shall be electro-hydraulic, designed and built by the machine manufacturer.
- Y ☒ N ☐ Implement pump shall not be mounted under cab floor, minimizing sound and vibration.
- Y ☒ N ☐ Implement valves shall be proportional priority pressure compensating for consistent response when multi-functioning any combination of implement controls and independent of engine speed.
- Y ☒ N ☐ Implement pump shall be solely dedicated to implement controls and not shared with any other components.
- Y ☒ N ☐ Lock valves shall be integrated into the main implement valve to prevent cylinder drift.
- Y ☒ N ☐ The hydraulic stand-by pressure shall be no more than 609 psi (4200 kPa).
- Y ☐ N ☒ There shall be a provision to install up to 15 modulating hydraulic valves, controlled by two multifunction, 3-axis joystick controls and auxiliary controls inside the cab.
- Y ☒ N ☐ Hydraulic valves shall not be mounted under the cab floor, minimizing sound and vibration.
- Y ☒ N ☐ Left and right blade lift cylinders shall have independent float capability, actuated by two multifunction, 3-axis joystick controls inside the cab, as a standard feature.
- Y ☒ N ☐ 0W Hydraulic Oil shall be provided. **No Exception**
- Y ☒ N ☐ Two (2) hydraulic valves for the snow wing and two (2) hydraulic valve for the front lift group shall be provided.
- Y ☒ N ☐ Hydraulic system shall have a separate oil tank solely dedicated to the implement pump.

## FRONT AXLE AND TANDEMS

- Y ☒ N ☐ Front axle oscillation shall be no less than 32 degrees total, per side 16 degrees up and 16 degrees down.
- Y ☒ N ☐ Front axle shall be an arched design for maximum ground clearance.
- Y ☒ N ☐ Wheel spindle shall be a "live" spindle design and rotate inside a sealed (with Duo-Cone seals) compartment with lightweight oil for lubrication of the bearings.
- Y ☒ N ☐ Front spindle shall be heat induction hardened.
- Y ☒ N ☐ Front wheel spindle bearings shall be a double-tapered design with the larger diameter bearing mounted closest to the centerline of the front tire.
- Y ☒ N ☐ Front wheel spindle maintenance intervals shall be no less than 2000 hrs.
- Y ☒ N ☐ Front wheel steering angle shall be no less than 50.0 degrees left or right.
- Y ☒ N ☐ Maximum front wheel lean shall be no less than 18 degrees left or right.
- Y ☒ N ☐ Machine minimum turning radius shall not exceed 25 ft. 7in. (7.8 m) using front steering, full articulation, full wheel lean and unlocked differential.
- Y ☐ N ☒ Distance between center of tandem wheels shall be no greater than 60 in (1523 mm) for optimum clearance and mobility.
- Y ☒ N ☐ Tandem chain pitch shall not be less than 2.0 in (50.8 mm).
- Y ☒ N ☐ Tandems shall be capable of oscillating 15 degrees front tandem up and 25 degrees front tandem down, with full machine articulation and having no interference between tandem wheel and machine structure.
- Y ☒ N ☐ Electronic and mechanical steering stops located at each wheel and steering cylinder relief valves shall be present to prevent steering system damage during normal operation.
- Y ☒ N ☐ Steering tie rod ends shall be heat induction hardened.
- Y ☒ N ☐ Machine shall provide 2 steering cylinders for maximum steering force.
- Y ☒ N ☐ When equipped with a ripper, the machine shall have a minimum ramp angle of 15.9 degrees.

## TIRES AND RIMS

- Y ☒ N ☐ 17.5R 25 MX XSNO+ 1\* MP tires mounted on 14" x 25" multi-piece rims shall be provided.
- Y ☒ N ☐ One (1) spare rear tire (17.5R 25 MX XSNO+ 1\*) mounted on multi piece rear rim assembly shall be provided for each grader ordered.

## OPERATORS STATION

- Y ☒ N ☐ A 42,075 BTU/h (12.3 kW) heater shall have an integral pressurizer and four-speed fan along with A/C.
- Y ☐ N ☒ Cab shall have angled floor design allowing direct visibility to moldboard.
- Y ☒ N ☐ Seat shall be a cloth-covered suspension seat with 3 in (76 mm) retractable seat belts, with adjustments for fore-aft position, seat height, seat back angle, thigh support, and lumbar support.
- Y ☒ N ☐ An enclosed cab with ROPS (Rollover Protective Structure) according to ISO 3471: 1986-1997 shall be provided.



- Y ☒ N ☐ Cab doors shall have a hold-open clasp with a ground-level release in addition to a release in the cab.
- Y ☒ N ☐ Cab shall be isolation-mounted to the front frame section of the machine.
- Y ☒ N ☐ Cab shall have fixed front window of laminated glass with intermittent wiper.
- Y ☒ N ☐ FOPS (Falling Object Protective Structure) shall be provided according to ISO 3449.
- Y ☐ N ☒ Machine shall have no less than 17 adjustable vents, positioned to direct air to front windows and operator.
- Y ☒ N ☐ Radio ready arrangement including 24V to 12V converter, two speakers, antenna and wiring shall be provided.
- Y ☒ N ☐ An instrument cluster shall be provided that includes a speedometer, tachometer, coolant temperature, fuel and articulation angle gauge.
- Y ☒ N ☐ Operator cab fresh air-filter shall be accessible for clean out and replacement, from outside of the cab at ground level.
- Y ☒ N ☐ A real-time information system shall monitor all system data and alert the operator of any faults through a digital text display. This performance and diagnostic information system shall be programmable for multiple languages .
- Y ☒ N ☐ Left and right side cab doors shall be provided.
- Y ☒ N ☐ Wipers shall be provided on side and rear windows.
- Y ☒ N ☐ Digital machine hour meter shall be provided.
- Y ☒ N ☐ An electronic message system shall provide real-time machine performance and diagnostic data.
- Y ☒ N ☐ The forward visibility shall be continuous and unobstructed glass from roofline to floor providing visibility of the blade, heel and toe, back of the cutting edge, and front tires.
- Y ☒ N ☐ Access to cab shall be three anti-skid steps.
- Y ☒ N ☐ Cab shall have cup holder, personal cooler holder/storage compartment for operator's manual, with a molded floor mat.
- Y ☒ N ☐ Window washer fluid bottle refill spout shall be located external of the cab.
- Y ☒ N ☐ An auxiliary control pod, with implement float control capability, shall be provided.
- Y ☒ N ☐ Auxiliary controls shall be available for control of attachment implements and/or work tools and shall be programmable via computer software.
- Y ☒ N ☐ Auxiliary controls shall be a finger-tip control type and located beside the right-hand joystick control.
- Y ☒ N ☐ An auxiliary, 2-axis joystick shall be available for control of a snow wing.
- Y ☒ N ☐ Integrated display and rear vision camera shall be provided with capability to view at all times without interfering with the gauge and diagnostic display.
- Y ☒ N ☐ A rear sun shade shall be available.
- Y ☐ N ☒ A rear defroster fan shall be available.
- Y ☒ N ☐ A machine security system shall be provided to electronically code keys selected by the user to limit usage by individuals or by time parameters.
- Y ☒ N ☐ An air suspension seat shall be provided.
- Y ☒ N ☐ A heated or both heated/ventilated seat shall be provided.
- Y ☒ N ☐ Machine shall have integrated Cross-Slope system provided from the factory.
- Y ☒ N ☐ Machine shall have an integrated cross slope system with cross coupling software to prevent automatic response lag (or saw-tooth) in order to maintain consistency and ensure accuracy.
- Y ☒ N ☐ Machine shall have a display for cross slope information that is separate from critical machine information such as engine RPM, ground speed and fluid temperature monitoring to ensure safe operation.
- Y ☒ N ☐ Machine shall include an integrated technology system that detects and reduces machine bounce to improve grading precision. When throttle control is engaged, engine speed automatically decreases at 15 percent intervals when machine bounce is detected.



Y\_\_\_ N ☒

Machine shall include an integrated technology system to allow the motor grader to articulate automatically while steering in tight spaces or around curves, obstacles, and turnarounds.

Y ☒ N\_\_\_

A seatbelt indicator sensor and light shall be provided

### **CIRCLE & MOLDBOARD**

Y ☒ N\_\_\_

Drawbar, circle, and moldboard shall be controlled with a maximum of two multifunction, 3-axis joysticks, as standard.

Y ☒ N\_\_\_

Drawbar wear strips shall be replaceable drop-in inserts made from nylon composite material, replaceable and adjustable from the top of the drawbar plate via removable cover plates.

Y ☒ N\_\_\_

The drawbar shall feature welded protective wear plates to prevent lift group contact with the primary drawbar structure.

Y ☒ N\_\_\_

The standard moldboard shall be at least 14 ft (4267 mm) long, 27 in (686 mm) high and no less than 1 in (25 mm) thick.

Y ☒ N\_\_\_

Moldboard shall have a bank slope angle capability of at least 90 degrees to both sides.

Y ☒ N\_\_\_

Moldboard side-shift cylinder shall be installed on the left-hand side to prevent snow wing interference with the cylinder rod.

Y ☒ N\_\_\_

Moldboard shall have no less than 16.3 in (413 mm) arc radius (blade curvature) for optimum productivity.

Y ☒ N\_\_\_

The moldboard retention system shall have no more than two retention points located on the left and right side of the moldboard. The surface area shall not be less than 50408 mm<sup>2</sup> (78.13 in<sup>2</sup>).

Y ☒ N\_\_\_

Moldboard shall have a hydraulic tip control through a range of 40 degrees fore and 5 degrees aft.

Y ☒ N\_\_\_

Moldboard wear strips shall be adjusted with lock screws, providing shim-less adjustment capability both vertical & horizontal.

Y ☒ N\_\_\_

The moldboard shall be pre-stressed during manufacturing for superior strength and durability.

Y ☒ N\_\_\_

Moldboard slide rails shall be constructed of a heat-treated, high carbon steel and have replaceable bronze alloy wear inserts on top and bottom.

Y\_\_\_ N ☒

Circle shall be a single piece, rolled-ring forging with raised wear surfaces on the top and bottom.

Y ☒ N\_\_\_

Circle shall be rotated by a hydraulically driven motor (pinion gear) with a minimum circle pinion torque capability of 44253 ft-lb (60,000 N-m).

Y ☒ N\_\_\_

Circle teeth contact surfaces shall be induction-hardened on the front 240 degrees of the circle.

- Y ☒ N ☐ Blade lift and center shift cylinders shall have replaceable bronze-alloy wear inserts in the ball sockets with removable shims to insure the ability to remove free play throughout the useful wear insert life.
- Y ☒ N ☐ The lift cylinder casting shall be welded to the front frame for added strength and structural integrity.
- Y ☒ N ☐ The standard mounting hardware for cutting edges and end bits shall be 3/4 in (19 mm).
- Y ☒ N ☐ All 7 Link Bar positions have replaceable bushings.
- Y ☒ N ☐ Link bar pin shall be separate from pin pulling mechanism for easier service and lower O&O costs.
- Y ☒ N ☐ The draft frame pivot connection shall have a single ball stud with grease zerk. Ball stud shall be bolt-on, shimable and adjustable to allow for quick and easy field serviceable design.
- Y ☒ N ☐ There shall be 3 side shift anchor positions shall be provided for extended reach capability as standard.
- Y ☒ N ☐ Pinion Gear shall be separate from the Pinion Shaft to allow for a quick and easy serviceable design.
- Y ☐ N ☒ Circle outside diameter shall be no less than 61.1 in (1553 mm).
- Y ☐ N ☒ Throat clearance with standard moldboard shall be at least 166 mm.
- Y ☐ N ☒ There will be no more than 6 replaceable wear inserts between the circle and drawbar providing at least 163 in<sup>2</sup> (1051 cm<sup>2</sup>) of wear surface area.
- Y ☒ N ☐ Blade lift accumulators shall be provided, protecting cutting edge and other components from damage from shock loads.

## ELECTRICAL

- Y ☒ N ☐ Machine shall have a 200 AH, 1400 CCA heavy-duty batteries.
- Y ☒ N ☐ Machine shall have a minimum 150-amp alternator at 24 volts provided which is brushless for increased life and durability.
- Y ☒ N ☐ Six 3 x 3 in (76 x 76 mm) halogen mounted cab lights shall be provided.
- Y ☒ N ☐ Starting system shall be a 24V direct electric type.
- Y ☒ N ☐ LED white reversing lamps and LED stop lamps shall be provided.
- Y ☐ N ☒ Electrical system shall have a master disconnect switch with a removable key (in addition to the ignition switch), accessible from the ground level.
- Y ☒ N ☐ All core machine systems shall be electronically connected, optimizing performance and preventing machine damage.
- Y ☒ N ☐ All wiring shall be arranged and located so as to facilitate regular visual inspections, not be in contact with hot surfaces and not routed with other services lines (e.g. fuel, oil, etc.).
- Y ☒ N ☐ All harnesses / cabling are secured with clipping clamps providing a gap between the conduit/harness and the mounting surface preventing material build-up.
- Y ☒ N ☐ Power must remain provided upon key off to purge DEF system lines and protect components.
- Y ☒ N ☐ There will be 2 (3 x 3 in) (76 x 76 mm) halogen mounted on the right-hand side of car roof bar to illuminate a snow wing shall be provided.



- Y ☒ N ☐ There will be 2 (3 x 3 in)(76 x 76 mm) halogen heel work lamps mounted underneath the cab shall be provided.
- Y ☒ N ☐ There will be 2 (3 x 3 in) (76 x 76 mm) halogen mid-frame toe lamps shall be provided to illuminate moldboard and surrounding area as an option.
- Y ☒ N ☐ There will be 2 (3 x 3 in) (76 x 76 mm) halogen ripper work lamps shall be provided.
- Y ☒ N ☐ High and low bar headlights with front turn signals shall be provided.
- Y ☒ N ☐ An amber LED high-speed strobe beacon shall be provided.
- Y ☒ N ☐ A 24V to 12V converter with 25-amp capacity shall be provided.

### **SERVICEABILITY**

- Y ☒ N ☐ Access to engine will be open from both sides with hinged engine side shields and full access service doors.
- Y ☐ N ☒ Machine shall have a lockable swing-out cooling fan housing featuring a latch-style mechanism (shall not be of a bolted design), allowing easy access to cores. Ability to open/close shall be ground level accessible, eliminating need to climb on machine.
- Y ☒ N ☐ The dip stick for checking transmission fluid shall be at ground level.
- Y ☒ N ☐ Hydraulic tank site gauge shall be readable from the ground.
- Y ☒ N ☐ Hydraulic tank filter shall be a cartridge style filter providing a separate filter element, housing, and drain valve for quick and clean servicing.
- Y ☒ N ☐ Ability for ground level fueling shall be provided.
- Y ☒ N ☐ Sampling ports shall be accessible from the tandem level and provide access to the engine, hydraulic, coolant, and fuel ports.
- Y ☒ N ☐ A two-way communication tool shall give service technicians easy access to stored diagnostic data and allow configuration of machine parameters.
- Y ☒ N ☐ Machine shall provide 3 points of contact on all areas of the machine, for mounting and dismounting.
- Y ☒ N ☐ The articulation joint shall have mechanical locking device to prevent frame articulation while servicing or transporting machine.
- Y ☒ N ☐ Left and right side tandem case assemblies shall be covered with punched steel plate to provide an adequate platform for standing and walking.
- Y ☒ N ☐ Engine oil filter shall be a 500 hour, vertical spin-on
- Y ☒ N ☐ Engine primary and final fuel filters shall have 500 hour service replacement interval.
- Y ☒ N ☐ Engine shall have primary fuel filter with fuel water separator and electronic sensor, quick release dual stage filter and primer pump.
- Y ☒ N ☐ The centralized lube bank shall be at the articulation joint to give access to difficult zerk fittings.
- Y ☒ N ☐ Transmission filter restriction indicator shall be displayed in the cab.
- Y ☒ N ☐ Lock out Tag out capabilities shall be provided standard and increase the safety levels during down time. This ensures that an energy isolating device and the machine which are being worked on and cannot be operated
- Y ☒ N ☐ DEF tank fill shall be located on the same side as the fuel tank fill, and be easily accessible from the ground
- Y ☒ N ☐ A guard shall be provided to protect the machine's transmission from debris.
- Y ☒ N ☐ An engine compartment light shall be provided

### **MINIMUM SERVICE FILL CAPACITIES**

- Y ☒ N ☐ Standard fuel tank capacity shall not be less than 104 gallons (394 L).



- Y\_\_\_ N ☒ Standard cooling system capacity shall not be less than 15 gallons (57 L).  
 Y\_\_\_ N ☒ Standard hydraulic tank capacity shall not be less than 16.9 gallons (64 L).  
 Y\_\_\_ N ☒ Standard engine oil capacity shall not be less than 7.9 gallons (30 L).  
 Y\_\_\_ N ☒ Standard tandem housing capacity shall not be less than 22.9 gallons (87.0 L) each.  
 Y\_\_\_ N ☒ Standard front wheel spindle bearing housing capacity shall not be less than 0.13 gallons (0.5 L).  
 Y\_\_\_ N ☒ Standard circle drive housing capacity shall not be less than 1.8 gallons (7 L).  
 Y\_\_\_ N ☒ Standard DEF tank capacity shall not be less than 5.8 gallons (22L).

## SAFETY AND ENVIRONMENTAL

- Y ☒ N\_\_\_ A circle drive slip clutch shall be provided to reduce horizontal moldboard impact damage.  
 Y ☒ N\_\_\_ Black glare-reducing paint shall be used on the front frame and engine enclosure to decrease glare from other equipment lights and reflection from the sun and snow.  
 Y ☒ N\_\_\_ Operator not present monitoring system will lockout implements, shall not allow gear shift out of neutral, and lock parking brake if system detects operator not present for increased safety.  
 Y ☒ N\_\_\_ Hydraulic implement lockout shall be achieved by actuating a single electrical switch within the operator station.  
 Y ☒ N\_\_\_ An external emergency kill switch shall be available for ground level engine shut down.  
 Y\_\_\_ N ☒ Secondary, electric steering pump with redundant wiring shall be provided as a backup to the primary implement hydraulic pump.  
 Y ☒ N\_\_\_ Machine shall have laminated glass for the front windows and doors, to protect the operator from shattered glass.  
 Y ☒ N\_\_\_ Machine shall provide dual exits allowing for emergency egress should one side become obstructed.  
 Y ☒ N\_\_\_ Electrical system shall have a master disconnect switch with a removable key and lock for added safety (in addition to the ignition switch).  
 Y\_\_\_ N ☒ Machine shall have a steering software system shall automatically reduce steering sensitivity as the ground speed increases.  
 Y ☒ N\_\_\_ Machine shall have back-up lights and sounding alarm when reverse gears are selected.  
 Y ☒ N\_\_\_ Environmentally friendly drain valves shall be provided for the hydraulic oil, engine oil, engine coolant, transmission, differential and fuel tank.  
 Y ☒ N\_\_\_ Cooling fan shall have both a shroud and rear grill for protection during service.  
 Y ☒ N\_\_\_ Machine shall allow cab interior and exterior lights to remain on separate from ignition switch, for safe exit of the machine during night operation.  
 Y ☒ N\_\_\_ Engine and transmission shall be rubber isolation mounted to reduce noise and vibration.  
 Y ☒ N\_\_\_ Drop down rear lights (stop/turn signal lights) shall be available to span the profile of the machine for increased safety.  
 Y ☒ N\_\_\_ Two outside mounted heated mirrors shall be provided.

## OPTIONS

- Y ☒ N ☐ Rear ripper shall have five ripper shank holders with three ripper shanks and nine scarifier shank holders with nine scarifier shanks. Ripper shall have float function
- Y ☒ N ☐ Rear ripper shall have a working penetration of maximum 16.8 in (428 mm) and a penetration force of at least 20,693 lb (9386 kg).
- Y ☒ N ☐ Front & rear fenders shall meet ISO-3457 requirements and shall not interfere with the ability to fully open any cab/engine enclosure or service access doors.
- Y ☒ N ☐ All core machine systems shall be electronically connected optimizing performance and preventing machine damage.
- Y ☐ N ☐ Machine shall have an engine coolant circulating heater provided.
- Y ☒ N ☐ Machine shall have no drive shafts that cross over the articulation hitch.
- Y ☒ N ☐ An integrated communication tool providing flow of vital machine data and location shall be provided. This system shall give automatic updates on machine parameters such as machine hours, machine condition, location, fault codes and alarms.
- Y ☒ N ☐ Machine shall have a transmission solenoid valve guard provided.
- Y ☒ N ☐ Rear vision camera with integrated display and wiring shall be provided.
- Y ☒ N ☐ Any machine bid must accept the counties existing front lift group or a new front lift group must be provided.
- Y ☒ N ☐ Additional hydraulic lines from the ripper valve to the back of the machine shall be provided. A ripper attachment accumulator, much like the accumulators on the blade lift, shall be installed to protect the ripper mounted components and operator from shock load.

## ALL WHEEL DRIVE SYSTEM

- Y ☒ N ☐ A steering compensation system shall enable "power turn" by adjusting the outside front tire speed up to 50% faster than the inside tire.
- Y ☒ N ☐ The grader must have the capability to disengage the transmission and provide hydraulic power to the front wheels only.
- Y ☒ N ☐ The All-Wheel Drive arrangement utilizes dedicated left and right pumps for precise hydraulic controls.
- Y ☒ N ☐ When AWD is engaged, flywheel horsepower is automatically increased up to an additional 27KW (37 hp) compared to the rear drive model.
- Y ☒ N ☐ All Wheel Drive system shall provide a hydrostatic front wheel drive only mode neutralizing the transmission for precise low-speed performance. The ground speed shall be infinitely variable between 0 and 5 mph (8 km/h)

## **LIST EXPLANATIONS FOR ANY "NO" ANSWERS BELOW IF CONSIDERATION IS DESIRED.**

Machine base weight is 39,650 for attachments add 4,65lbs

Top of cab is 134", not 130"

Wheel base is 245" not 241"

9L Engine not 9.3l

We have Different power configuration than Cat,

Our Daily service is completed from the Deere run

Coolant interval is 6000hr

Deere has perforated inlet screens to match our cooling package

5th gear tops out at 10.4mph

Cat spec x14

Deere has integral brakes built into the rear axle x2

2,750 psi max

61" not 60"

Square floor

14 vents

Option For fan

Operator has full control of articulation

Welded circle

60"not 61"

9 circle wear strips not 6, more is better here

Non removable disconnect switch

Cooling system is bolted for long life

Cat spec x8



## MACHINE FUEL CONSUMPTION DATA

Fuel consumption. ....<sup>4</sup> gal/hr.

(Please do not enter in a range)

Machine fuel consumption gal/hr figure must be backed up by providing written regional fuel consumption results data from a minimum of 25 like machines. Data must be actual numbers / results retrieved from a minimum of 25 like machines via a gps or cellular data link. Data will be based on average fuel of consumption at least one-hundred like machines. Reports must indicate fuel consumption at idol and while machine is operating under a full load. Vendors must provide a copy of the data used.



# Fuel and Depreciation Calculator

## Rental Fleet Motor Graders

7/1/17 to 8/31/17

Please Enter Your Values Here:

\$ / Fuel per Gallon

\$ 2.25

872G Motor Graders	Idle State				Working State				Machine Totals		
	Idle (hr)	Idle Fuel (gal)	Low Load (hr)	Low Load Fuel (gal)	Med Load (hr)	Med Load Fuel (gal)	High Load (hr)	High Load Fuel (gal)	Total Machine Hours for the period	Average Idle Time	Avg Fuel Rate (gal/hr)
1DW872GPCGF675281	117.4	146	170.2	512.5	153.8	894.3	39.1	402	480.5	24.4%	4.1
1DW872GPHBE638543	41.1	55.2	83.3	258	115.7	833.9	18.8	213.4	258.9	15.9%	5.3
1DW872GPAEF663485	109.8	136.2	148.6	387.9	72.4	367.6	26.4	277.5	357.2	30.7%	3.3
1DW872GPAEF665415	30.3	49.8	65.8	201.4	71.4	404.7	19.1	186.6	186.6	16.2%	4.5
1DW872GXPEF658277	127.5	142.5	69.9	207.8	77.5	432.4	15.8	160.5	290.7	43.9%	3.2
1DW872GPEEF665600	26	35.4	26.7	81.4	57.1	359.2	54.2	552.3	164	15.9%	6.3
1DW872GPEEF658887	77.3	104.2	118.5	348.3	132.5	716.9	61.9	587.2	390.2	19.8%	4.5
1DW872GPVFF666581	29.7	40.3	29.4	79.1	34	184.2	6.8	60.1	99.9	29.7%	3.6
1DW872GPJEF665555	57.1	73	152.9	456.9	56.8	314.7	14.5	149.3	281.3	20.3%	3.5
1DW872GPAEF665527	120.9	150	157.5	467.4	76.8	435.7	33.4	361.7	388.6	31.1%	3.6
1DW872GPAEF665270	73.7	118.8	125.2	389.1	122.4	685.1	23.3	225.5	344.6	21.4%	4.1
1DW872GPLEF665190	87.6	97.2	46.6	153.5	62.8	374	19.1	182.8	216.1	40.5%	3.7
1DW872GPAEF665530	23.3	29.3	37.1	100	56.4	340	33.8	339.2	150.6	15.5%	5.4
1DW872GPHFF666505	59.6	69	86.6	265.6	53.6	299.7	14.3	140.9	214.1	27.8%	3.6
1DW872GPLEF665237	46.4	67.7	30.7	86	29.2	163.5	10.2	107.3	116.5	39.8%	3.6
1DW872GXCF6653811	81.1	86.3	159.6	442.9	52.7	326.5	3.2	34.4	296.6	27.3%	3.0
1DW872GPECE647763	56.2	73.1	99.8	328.5	147.6	1019.1	19.7	227.5	323.3	17.4%	5.1
1DW872GPEFF667333	46.5	59.1	167.8	511.2	108.2	591.2	20	180	342.5	13.6%	3.9
1DW872GPJEF661490	89.2	118.3	146.2	402.2	55.1	277.3	12.8	122.4	303.3	29.4%	3.0
1DW872GPKFF666429	44	59.5	97.3	284.9	87.5	498.2	31.2	307.5	260	16.9%	4.4
1DW872GPAFF667506	83.6	108.2	88.7	280	75.5	417.1	9.8	93.7	257.6	32.5%	3.5
1DW872GPVFF672350	120	166.1	105.8	336.6	103.9	568.2	22.1	212.2	351.8	34.1%	3.6
1DW872GPPFF662541	49.2	67.8	64.6	193.1	57.2	329.2	23.5	234.5	194.5	25.3%	4.2
1DW872GPVGF675265	147.4	225.7	99.3	296.9	112.1	622.9	26.1	254.3	384.9	38.3%	3.6
1DW872GPAGF675123	146.7	175.6	149.9	439.9	103.6	612.6	33.1	347.5	433.3	33.9%	3.6
Total Hours	1891.6		2528		2075.8		592.2				
Total Fuel Consumed		2454.3		7511.1		12068.2		5960.3			4.0
Total Cost of Fuel		\$ 5,522.18		\$ 16,899.98		\$ 27,153.45		\$ 13,410.68			

Total Fuel Cost

\$ 62,986.28

## **BIDDER'S CHECKLIST**

**Please be sure you have completed the following prior to submitting your bid:**

1. Read and understood the specifications.
2. Enclosed all documents listed in the Bidder's Submission Requirements (p.7 of Bid Package).
3. Made yourself familiar with any State laws that pertain to this bid.
4. Asked any questions, and received answers, regarding the bid procedure, specifications, or general information.

**\*\*\* NOTE: Any bid that is not properly addressed (including bidders phone no.), or that is delivered past the date and time indicated on the invitation to bid, will be invalid and will not be opened or considered.\*\*\***



AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS

**AFFIDAVIT OF NON-COLLUSION**

I hereby swear (or affirm) under the penalty; for perjury;

- (1) That I am the bidder (if bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);
- (2) That the attached bid or bids have been arrived at by the bidder independently, and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;
- (3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and \
- (4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

SIGNED: [Signature]

FIRM NAME: RDO Equipment

DATE: 9/6/18

ADDRESS: 4900 Tr. H. 11 Road

SUBSCRIBED AND SWORN TO BEFORE ME

THIS 6<sup>th</sup> DAY OF September, 2018.

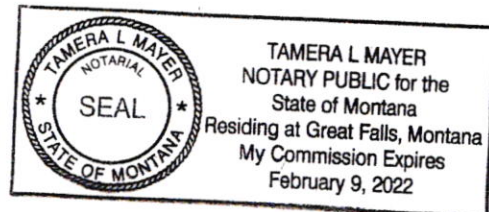
NOTARY PUBLIC

Print name:

My commission expires: 2/9/22

BIDDER'S E.I NUMBER: 81-4124511

(Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941)



## WARRANTY & AVAILABILITY GUARANTEE

In order to guarantee the cost of repairs and minimize downtime for the County, all bidders shall include with their bid:

A total machine warranty, including parts and labor for required repairs, for a period of four (4) years four thousand (4,000) hours, whichever occurs first, from date of delivery. Warranty repairs will be provided during regular working hours. If the County requests that work be done outside of regular working hours, which results in overtime, the County will pay the differential between regular time and overtime wage. Lodging, meals, travel time, parts, freight and any transportation of units between County and seller will be at seller's expense.

County will provide seller with Scheduled Oil Sampling for analysis from date of delivery. Seller will provide the oil sample bottles & the expense of the processing the oil samples.

Annual machine inspections and adjustments, as prescribed in the maintenance guides, shall be performed in the field (County's location), unless prior more convenient arrangements are made.

98% Guaranteed Machine Availability. Bidder guarantees that the machine shall be operable and available for use by the County for at least 98% of the County's work year, which shall be calculated based on a 2080 hour work year. After any continuous downtime, which exceeds 20 work week hours, Seller shall provide County with a replacement machine that is comparable to the motor grader purchased under this bid proposal at no cost to the County. If seller fails to provide County with a comparable replacement machine, County shall charge seller with an hourly assessment of \$250.00 per hour for all lost work hours beyond the first 20 work hours lost.

County shall make the machines available for repairs and inspection upon reasonable request and notice by the successful bidder.

SIGNED: [Signature]

FIRM NAME: RDO Equipment

DATE: September 6<sup>th</sup> 2018

ADDRESS: 4900 Tr. H. 11

SUBSCRIBED AND SWORN TO BEFORE ME

THIS 6<sup>th</sup> DAY OF September, 2018.

NOTARY PUBLIC

Print name:

My commission expires: 2/9/22

